

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Gridley et al.

Application No. 09/491,661

Art Unit: 1733

Examiner: J. Fischer

Filed: January 27, 2000

For: METHOD AND APPARATUS FOR
PREPARING TIRE TREAD FOR A
RETREAD TIRE

AMENDMENTS TO SPECIFICATION, CLAIMS, AND ABSTRACT
MADE IN RESPONSE TO OFFICE ACTION DATED SEPTEMBER 25, 2001

Amendments to the paragraph beginning at page 11, line 4:

As depicted in FIG. 4, casing 22 has a curved crown section 27. Crown 27 is substantially the surface to which cushion gum 34 is applied. In an exemplary embodiment, cushion gum 34 has a polyethylene protective layer 35 adhered thereto, to prevent adhesion to other layers of cushion gum while rolled and to prevent adhesion to application rollers 40 during application. The controlled stretching of cushion gum 34, by the differential velocity introduced by gears 37, provides improved conformity of cushion gum 34 to the contoured crown [23] 27 of casing 22. The improved conformity provides uniform adhesion and contact of cushion gum 34 to crown [23] 27 causing the cushion gum edge to substantially contact casing 22 wrinkle-free and further reduces the need for providing extra strips of cushion gum along shoulders 21 of crown [23] 27 (i.e., cushion gum stripping).

Amendments to the paragraph beginning at page 11, line 20:

After cushion gum 34 has been applied to casing 22, rollers 40 are moved to engage and provide a force onto cushion gum 34. Casing 22 is rotated while rollers 40 provide a force, in a direction indicated by arrow [37] 38 in FIG. 4, onto cushion gum 34. In an exemplary embodiment, wheels 40 begin in the middle of crown [23] 27 and, during subsequent rotations, wheels 40 are moved towards shoulders 21 of crown [23] 27 in the directions indicated by arrows 41. This operation, often referred to as stitching,

provides desirable adherence of cushion gum 34 to the surface of casing 22 (crown 27 and shoulders 21), while aiding in removing any trapped air pockets between cushion gum 34 and casing 22. After the stitching operation is completed, a measurement of the circumference of tire casing 22 plus cushion gum layer 34 is taken by measurement wheel 50 as casing 22 is rotated. Polyethylene layer 35 is then removed.

Amendments to existing claims:

14. (Amended) A method of cutting a length of tire tread for a retread tire having a tire casing [and a cushion gum applied to the tire casing], the method comprising:

measuring a circumference of a tire casing [with the cushion gum applied]
wherein a cushion gum may be present;

automatically communicating, electronically, the circumference of the tire casing [with the cushion gum applied] to [the] a tire tread dispenser; [and]

automatically dispensing[, automatically,] a length of tire tread based on the circumference of the tire casing [with the cushion gum applied];

adjusting said tire tread so that the tire tread design on each end matches at the point where the tread may be cut; and

cutting the tire tread so that said tread design will appear substantially continuous across a seam generated by each end of said tread once applied to the tire casing.